## JOB ORDER COST ACCOUNTING

### TRUE-FALSE STATEMENTS

 1. Cost accounting is primarily concerned with accumulating information about product costs.

 2. A job order cost system is most appropriate when a large volume of uniform products are produced.

 3. A process cost accounting system is appropriate for homogeneous products that are continuously mass produced.

 4. The perpetual inventory method cannot be used in a job order cost system.

 5. A job order cost system and a process cost system are two alternative methods for valuing inventories.

 6. A job order cost system identifies costs with a particular job rather than with a set time period.

 7. A company may use either a job order cost system or a process cost system, but not both.

 8. Raw Materials Inventory, Factory Labor, and Manufacturing Overhead are all control accounts in the general ledger when a job order cost accounting system is used.

 9. Accumulating and assigning manufacturing costs are two important activities in a job order cost system.

 10. Recording the acquisition of raw materials is a part of accumulating manufacturing costs.

 11. Manufacturing costs are generally incurred in one period and recorded in a subsequent period.

 12. The Purchases account is credited for all raw materials purchase returns and allowances.

 13. The stores ledger cards are the subsidiary ledger for Raw Materials Inventory control account in the general ledger.

 14. When raw materials are purchased, the Work in Process Inventory account is debited.

 15. Factory labor should be assigned to selling and administrative expenses on a proportionate basis.

 16. Fringe benefits and payroll taxes associated with factory workers should be accumulated as a part of Factory Labor.

 17. Job order cost sheets constitute the subsidiary ledger of the control account Work In Process Inventory.

 18. In a job order cost system, each entry to the Work In Process Inventory account should be accompanied by a posting to one or more job cost sheets.

 19. Direct materials requisitioned from the storeroom should be charged to the Work In Process Inventory account and the job cost sheets for the individual jobs on which the material was used.

 20. Manufacturing overhead is the only product cost that can be assigned to jobs as soon as the costs are incurred.

 21. There should be a separate job cost sheet for each job.

 22. Actual manufacturing overhead costs are assigned to each job by tracing each overhead cost to a specific job.

 23. The formula for the predetermined overhead rate is estimated annual overhead costs divided by an estimated activity base.

 24. Actual manufacturing overhead costs should be charged to the Work in Process Inventory account as they are incurred.

 25. A good system of internal control requires that the job order cost sheet be destroyed as soon as the job is complete.

 26. Finished Goods Inventory is charged for the cost of jobs completed during a period.

 27. When goods are sold, the Cost of Goods Sold account is debited and the Work in Process Inventory account is credited.

 28. Total manufacturing costs for a period consists of the costs of direct material used, the cost of direct labor incurred, and the manufacturing overhead applied during the period.

 29. Overapplied overhead means that actual manufacturing overhead costs were greater than the manufacturing overhead costs applied to jobs.

 30. If monthly financial statements are prepared, underapplied overhead is shown as a prepaid expense on the balance sheet.

##### Answers to True-False Statements

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Item** | **Ans.** | **Item** | **Ans.** | **Item** | **Ans.** | **Item** | **Ans.** | **Item** | **Ans.** | **Item** | **Ans.** |
| 1. | T | 6. | T | 11. | F | 16. | T | 21. | T | 26. | T |
| 2. | F | 7. | F | 12. | F | 17. | T | 22. | F | 27. | F |
| 3. | T | 8. | F | 13. | T | 18. | T | 23. | T | 28. | T |
| 4. | F | 9. | T | 14. | F | 19. | T | 24. | F | 29. | F |
| 5. | T | 10. | T | 15. | F | 20. | F | 25. | F | 30. | T |

### MULTIPLE CHOICE QUESTIONS

 31. A major purpose of cost accounting is to

 a. classify all costs as operating or nonoperating.

 b. measure, record, and report period costs.

 c. provide information to stockholders for investment decisions.

 d. measure, record, and report product costs.

 32. The two basic types of cost accounting systems are

 a. job order and job accumulation systems.

 b. job order and process cost systems.

 c. process cost and batch systems.

 d. job order and batch systems.

 33. A process cost system would most likely be used by a company that makes

 a. motion pictures.

 b. repairs to automobiles.

 c. breakfast cereal.

 d. college graduation announcements.

 34. Which of the following would be accounted for using a job order cost system?

 a. The production of personal computers

 b. The production of automobiles

 c. The refining of petroleum

 d. The construction of a new campus building

 35. Process costing is used when

 a. the production process is continuous.

 b. production is aimed at filling a specific customer order.

 c. heterogeneous products are involved.

 d. costs are to be assigned to specific jobs.

 36. Process costing is not used when

 a. homogeneous goods are being produced.

 b. large volumes are produced.

 c. jobs have distinguishing characteristics.

 d. a series of connected manufacturing processes is necessary.

 37. An important feature of a job order cost system is that each job

 a. must be similar to previous jobs completed.

 b. has its own distinguishing characteristics.

 c. must be completed before a new job is accepted.

 d. consists of one unit of output.

 38. The flow of costs in a job order cost system

a. involves accumulating manufacturing costs incurred and assigning the accumulated costs to work done.

 b. cannot be measured until all jobs are complete.

 c. measures product costs for a set time period.

 d. generally follows a LIFO cost flow assumption.

 39. In a job order cost accounting system, the Raw Materials Inventory account is

 a. an expense.

 b. a control account.

 c. not used.

 d. a period cost.

 40. When a job is completed and all costs have been accumulated on a job cost sheet, the journal entry that should be made is

 a. Finished Goods Inventory

 Direct Materials

 Direct Labor

 Manufacturing Overhead

 b. Work In Process Inventory

 Direct Materials

 Direct Labor

 Manufacturing Overhead

 c. Raw Materials Inventory

 Work In Process Inventory

 d. Finished Goods Inventory

 Work In Process Inventory

 41. The two major steps in the flow of costs are

 a. allocating and assigning.

 b. acquiring and accumulating.

 c. accumulating and assigning.

 d. accumulating and amortizing.

 42. The Raw Materials Inventory account is

 a. a subsidiary account.

 b. debited for invoice costs and freight costs chargeable to the purchaser.

 c. debited for purchase discounts taken.

 d. debited for purchase returns and allowances.

 43. Records of individual items of raw materials would not be maintained

 a. electronically.

 b. manually.

 c. on stores ledger cards.

 d. in the Raw Materials Inventory account.

 44. Cost of raw materials are debited to Raw Materials Inventory when the

 a. materials are ordered.

 b. materials are received.

 c. materials are put into production.

 d. the bill for the materials is paid.

 45. Raw Materials Inventory records are also referred to as

 a. the Raw Materials control account.

 b. the stores ledger cards.

 c. the purchases journal.

 d. periodic inventory records.

 46. After all postings have been completed, the sum of the balances in the raw materials subsidiary ledger should equal the

 a. balance in the Raw Materials Inventory control account.

 b. cost of materials charged to Work in Process Inventory.

 c. cost of materials purchased.

 d. cost of the materials placed into production.

 47. Factory labor costs

 a. are accumulated in a control account.

 b. do not include pension costs.

 c. include vacation pay.

 d. are based on workers net pay.

 48. Factory Labor is a(n)

 a. expense account.

 b. control account.

 c. subsidiary account.

 d. manufacturing cost clearing account.

 49. Kline Manufacturing has the following labor costs:

 Factory—Gross wages $117,000

 Factory—Net wages 96,000

 Employer Payroll Taxes Payable 15,000

 The entry to record the cost of factory labor and the associated payroll tax expense will include a debit to Factory Labor for

 a. $132,000.

 b. $117,000.

 c. $111,000.

 d. $102,000.

 50. Factory labor costs

 a. accumulate in advance of utilization.

 b. accumulate in a control account.

 c. include sick pay earned by factory workers.

 d. accumulate in the Factory Labor Expense account.

 51. Which of the following is not a control account?

 a. Manufacturing Overhead

 b. Factory Labor

 c. Accounts Receivable

 d. Raw Materials Inventory

 52. Manufacturing Overhead would not have a subsidiary account for

 a. utilities.

 b. property taxes.

 c. insurance.

 d. raw materials inventory.

 53. The entry to record the acquisition of raw materials on account is

 a. Work in Process Inventory

 Accounts Payable

 b. Manufacturing Overhead

 Raw Materials Inventory

 Accounts Payable

 c. Accounts Payable

 Raw Materials Inventory

 d. Raw Materials Inventory

 Accounts Payable

 54. Job cost sheets constitute the subsidiary ledger for the

 a. Finished Goods Inventory account.

 b. Cost of Goods Sold account.

 c. Work In Process Inventory account.

 d. Cost of Goods Manufactured account.

 55. A materials requisition slip showed that direct materials requested were $30,000 and indirect materials requested were $6,000. The entry to record the transfer of materials from the storeroom is

 a. Work In Process Inventory 30,000

 Raw Materials Inventory 30,000

 b. Direct Materials 30,000

 Indirect Materials 6,000

 Work in Process Inventory 36,000

 c. Manufacturing Overhead 36,000

 Raw Materials Inventory 36,000

 d. Work In Process Inventory 30,000

 Manufacturing Overhead 6,000

 Raw Materials Inventory 36,000

 56. The job cost sheet does not show

 a. costs chargeable to a specific job.

 b. the total costs of a completed job.

 c. the unit cost of a completed job.

 d. the cost of goods sold.

 57. Under an effective system of internal control, the authorization for issuing materials is made

 a. orally.

 b. on a prenumbered materials requisition slip.

 c. by the accounting department.

 d. by anyone on the production line.

 58. A copy of the materials requisition slip

 a. is routed to the treasurer's office for payment.

 b. becomes the subsidiary ledger for the Work in Process Inventory.

 c. can be used as a subsidiary ledger for Raw Materials Inventory.

 d. is retained by the storeroom, and the original is sent to accounting.

 59. Materials requisition slips are costed

 a. by production supervisors.

 b. by factory personnel who work on the production line.

 c. after the goods have been sold.

 d. using any of the inventory costing methods.

 60. Postings to control accounts in a costing system are made

 a. monthly.

 b. daily.

 c. annually.

 d. semi-annually.

 61. Which of the following shows entries only to control accounts?

 a. Factory Labor

 Wages Payable

 b. Work in Process

 Factory Labor

 Raw Materials Inventory

 Wages Payable

 c. Work in Process

 Manufacturing Overhead

 Raw Materials Inventory

 d. Factory Labor

 Raw Materials Inventory

 Accounts Payable

 Wages Payable

 62. A time ticket does not indicate the

 a. employee's name.

 b. account to be charged.

 c. number of personal exemptions claimed by the employee.

 d. job number.

 63. Time tickets should be approved by

 a. the audit committee.

 b. co-workers.

 c. the employee's supervisor.

 d. the payroll department.

 64. If the entry to assign factory labor shows only a debit to Work In Process Inventory, then all labor costs were

 a. direct labor.

 b. indirect labor.

 c. overtime related.

 d. regular hours.

 65. The principal accounting record used in assigning costs to jobs is

 a. a job cost sheet.

 b. the cost of goods manufactured schedule.

 c. the Manufacturing Overhead Control account.

 d. the stores ledger cards.

 66. The following information is available for completed Job No. 402: Direct materials, $20,000; direct labor, $30,000; manufacturing overhead applied, $15,000; units produced, 5,000 units; units sold, 4,000 units. The cost of the finished goods on hand from this job is

 a. $10,000.

 b. $65,000.

 c. $13,000.

 d. $52,000.

 67. The labor costs that have been identified as indirect labor should be charged to

 a. manufacturing overhead.

 b. direct labor.

 c. the individual jobs worked on.

 d. salary expense.

 68. Manufacturing overhead is applied to each job

 a. at the time when the overhead cost is incurred.

 b. by means of a predetermined overhead rate.

 c. at the end of the year when actual costs are known.

 d. only if the overhead costs can be directly traced to that job.

 69. The predetermined overhead rate is based on the relationship between

 a. estimated annual costs and actual activity.

 b. estimated annual costs and expected annual activity.

 c. actual monthly costs and actual annual activity.

 d. estimated monthly costs and actual monthly activity.

 70. The predetermined overhead rate is

 a. determined on a moving average basis throughout the year.

 b. not calculated until actual overhead costs are incurred.

 c. determined at the beginning of the year.

 d. determined at the end of the current year.

 71. In calculating a predetermined overhead rate, a recent trend in automated manufacturing operations is to choose an activity base related to

 a. direct labor hours.

 b. indirect labor dollars.

 c. machine hours.

 d. raw material dollars.

 72. If annual overhead costs are expected to be $600,000 and direct labor costs are expected to be $1,000,000, then

 a. $1.67 is the predetermined overhead rate.

 b. for every dollar of manufacturing overhead, 60 cents of direct labor will be assigned.

 c. for every dollar of direct labor, 60 cents of manufacturing overhead will be assigned.

 d. a predetermined overhead rate cannot be determined.

 73. Overhead application is recorded with a

 a. credit to Work in Process Inventory.

 b. credit to Manufacturing Overhead.

 c. debit to Manufacturing Overhead.

 d. credit to job cost sheets.

 74. At the beginning of the year, Monroe Company estimates annual overhead costs to be $600,000 and that 300,000 machine hours will be operated. Using machine hours as a base, the amount of overhead applied during the year if actual machine hours for the year was 315,000 hours is

 a. $157,500.

 b. $571,429.

 c. $315,000.

 d. $630,000.

 75. The predetermined overhead rate may be computed using all of the following activity bases *except*

 a. direct labor costs.

 b. direct labor hours.

 c. machine hours.

 d. indirect labor costs.

 76. Historically, the activity base used in computing the predetermined overhead rate has been

 a. machine hours.

 b. direct labor costs.

 c. direct labor hours.

 d. direct labor costs or direct labor hours.

 77. At the end of each month, the sum of the costs shown on the job cost sheets should equal the balance in

 a. Cost of Goods Sold.

 b. Finished Goods Inventory.

 c. Manufacturing Overhead.

 d. Work in Process Inventory.

 78. Each of the following costs can be assigned to specific jobs on the basis of actual costs incurred *except*

 a. direct materials.

 b. direct labor.

 c. manufacturing overhead.

 d. All of these costs can be assigned based on actual costs.

 79. The predetermined overhead rate is computed using

 a. actual overhead costs.

 b. applied overhead costs.

 c. estimated overhead costs.

 d. predetermined overhead costs.

 80. In determining total manufacturing costs on the cost of goods manufactured schedule,

 a. beginning work in process inventory should have a zero balance.

 b. actual manufacturing overhead costs appear as a deduction.

 c. manufacturing overhead applied is added to direct materials and direct labor.

 d. ending work in process inventory is deducted from beginning work in process inventory.

Use the following information for questions 81–82.

Becker Company developed the following data for the current year:

 Beginning work in process inventory $ 60,000

 Direct materials used 36,000

 Actual overhead 72,000

 Overhead applied 54,000

 Cost of goods manufactured 66,000

 Total manufacturing costs 180,000

 81. Becker Company's direct labor cost for the year is

 a. $18,000.

 b. $90,000.

 c. $54,000.

 d. $72,000.

 82. Becker Company's ending work in process inventory is

 a. $174,000.

 b. $120,000.

 c. $114,000.

 d. $54,000.

 83. Reich Manufacturing Company developed the following data:

 Beginning work in process inventory $ 90,000

 Direct materials used 70,000

 Actual overhead 110,000

 Overhead applied 80,000

 Cost of goods manufactured 120,000

 Ending work in process 200,000

 Reich Manufacturing Company's total manufacturing costs for the period are

 a. $240,000.

 b. $230,000.

 c. $180,000.

 d. cannot be determined from the data provided.

 84. Which of the following is not used in assigning manufacturing costs to work in process inventory?

 a. Actual manufacturing overhead

 b. Time tickets

 c. Materials requisitions

 d. Predetermined overhead rate

 85. On the cost of goods manufactured schedule, the cost of goods manufactured agrees with the

 a. balance of Finished Goods Inventory at the end of the period.

 b. total debits to Work in Process Inventory during the period.

 c. amount transferred from Work in Process Inventory to Finished Goods during the period.

 d. debits to Cost of Goods Sold during the period.

 86. Gannon Company had the following information at December 31:

 Finished goods inventory, January 1 $20,000

 Finished goods inventory, December 31 60,000

 If the cost of goods manufactured during the year amounted to $840,000 and annual sales were $1,100,000, the amount of gross profit for the year is

 a. $260,000.

 b. $800,000.

 c. $300,000.

 d. $220,000.

 87. Winter Company incurred direct materials costs of $500,000 during the year. Manufactur-ing overhead applied was $90,000 and is applied at the rate of 60% of direct labor costs. Winter Company’s total manufacturing costs for the year were

 a. $740,000.

 b. $644,000.

 c. $590,000.

 d. $944,000.

 88. Cost of goods sold is obtained from

 a. analysis of all the control accounts in the cost system.

 b. the finished goods inventory records.

 c. the work in process inventory records.

 d. the Raw Materials Inventory control account.

 89. In a job order cost system, a credit to Manufacturing Overhead will be accompanied by a debit to

 a. Cost of Goods Manufactured.

 b. Finished Goods Inventory.

 c. Work in Process Inventory.

 d. Raw Materials Inventory.

 90. Debits to Work in Process Inventory are accompanied by a credit to all but one of the following accounts:

 a. Raw Materials Inventory.

 b. Factory Labor.

 c. Manufacturing Overhead.

 d. Cost of Goods Sold.

 91. Which of the following is not viewed as part of accumulating manufacturing costs in a job order cost system?

 a. Cost of goods sold is recognized

 b. Raw materials are purchased

 c. Factory labor is incurred

 d. Manufacturing overhead is incurred

 92. Which of the following is not viewed as part of assigning manufacturing costs in a job order cost system?

 a. Manufacturing overhead is applied

 b. Raw materials are used

 c. Manufacturing overhead is incurred

 d. Completed goods are recognized

 93. The entry to recognize cost of goods sold includes a credit to

 a. Cost of Goods Sold.

 b. Finished Goods Inventory.

 c. Sales.

 d. Work in Process Inventory.

 94. Total manufacturing costs include

 a. actual overhead costs.

 b. applied overhead costs.

 c. budgeted overhead costs.

 d. estimated overhead costs.

 95. When monthly financial statements are prepared, underapplied overhead will appear as

 a. unearned revenue.

 b. a current asset.

 c. "Other Revenues and Gains," on the income statement.

 d. a reduction to cost of goods sold.

 96. If manufacturing overhead has been underapplied during the year, the adjusting entry at the end of the year will show a

 a. debit to Manufacturing Overhead.

 b. credit to Cost of Goods Sold.

 c. debit to Work in Process Inventory.

 d. debit to Cost of Goods Sold.

 97. If manufacturing overhead has been overapplied during the year, the adjusting entry at the end of the year will show a

 a. debit to Manufacturing Overhead.

 b. credit to Finished Goods Inventory

 c. debit to Cost of Goods Sold.

 d. credit to Work in Process Inventory.

 98. The existence of under- or overapplied overhead at the end of the month

 a. is expected to be offset in future months.

 b. indicates that an error has been made.

 c. requires a retroactive adjustment to the cost of all jobs completed.

 d. is written off as a bad estimate expense.

 99. Conceptually, any under- or overapplied overhead at the end of the year should be allocated among all of the following except

 a. cost of goods sold.

 b. ending work in process inventory.

 c. ending raw materials inventory.

 d. ending finished goods inventory.

100. If at the end of the year, Manufacturing Overhead has been overapplied, it means that

 a. actual overhead costs were greater than the overhead assigned to jobs.

 b. actual overhead costs were less than the overhead assigned to jobs.

 c. overhead has not been applied to jobs still in process.

 d. cost of goods will have to be increased by the amount of the overapplied overhead.

101. If the Manufacturing Overhead account has a debit balance at the end of a period, it means that

 a. actual overhead costs were less than overhead costs applied to jobs.

 b. actual overhead costs were greater than overhead costs applied to jobs.

 c. actual overhead costs were equal to overhead costs applied to jobs.

 d. no jobs have been completed.

102. If the manufacturing overhead costs applied to jobs worked on were greater than the actual manufacturing costs incurred during a period, overhead is said to be

 a. underapplied.

 b. overapplied.

 c. in error.

 d. prepaid.

103. At the end of the year, any balance in the Manufacturing Overhead account is generally eliminated by adjusting

 a. Work In Process Inventory.

 b. Finished Goods Inventory.

 c. Cost of Goods Sold.

 d. Raw Materials Inventory.

104. If Manufacturing Overhead has a credit balance at the end of the period, then

 a. overhead has been underapplied.

 b. the overhead assigned to Work in Process Inventory is less than the overhead incurred.

 c. overhead has been overapplied.

 d. management must take corrective action.

 105. The Manufacturing Overhead account shows debits of $20,000, $24,000, and $28,000 and one credit for $76,000. Based on this information, manufacturing overhead

 a. has been overapplied.

 b. has been underapplied.

 c. has not been applied.

 d. shows a zero balance.

 106. When monthly financial statements are prepared, a difference between actual overhead and overhead applied will appear on

 a. the balance sheet.

 b. the income statement.

 c. the statement of stockholders' equity.

 d. none of the financial statements.

 107. When monthly financial statements are prepared, overapplied overhead will appear as

 a. unearned revenue.

 b. a current asset.

 c. a loss on the income statement under "Other Expenses and Losses."

 d. miscellaneous expense.

 108. Overapplied overhead means that the overhead assigned to work in process is

 a. less than the actual overhead.

 b. less than the estimated overhead costs.

 c. greater than the overhead incurred.

 d. greater than the estimated overhead costs.

 109. A credit balance in the Manufacturing Overhead account at the end of the period indicates that

 a. actual overhead was greater than estimated overhead costs.

 b. overhead was underapplied.

 c. actual overhead was less than estimated overhead costs.

 d. actual overhead was less than applied overhead.

 110. Underapplied overhead is

 a. reported as unearned revenue in the balance sheet.

 b. added to the Manufacturing Overhead account.

 c. added to Cost of Goods Sold.

 d. credited to Cost of Goods Sold.

##### Answers to Multiple Choice Questions

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Item** | **Ans.** | **Item** | **Ans.** | **Item** | **Ans.** | **Item** | **Ans.** | **Item** | **Ans.** | **Item** | **Ans.** | **Item** | **Ans.** |
| 31. | d | 43. | d | 55. | d | 67. | a | 79. | c | 91. | a | 103. | c |
| 32. | b | 44. | b | 56. | d | 68. | b | 80. | c | 92. | c | 104. | c |
| 33. | c | 45. | b | 57. | b | 69. | b | 81. | b | 93. | b | 105. | a |
| 34. | d | 46. | a | 58. | d | 70. | c | 82. | a | 94. | b | 106. | a |
| 35. | a | 47. | c | 59. | d | 71. | c | 83. | b | 95. | b | 107. | a |
| 36. | c | 48. | d | 60. | a | 72. | c | 84. | a | 96. | d | 108. | c |
| 37. | b | 49. | a | 61. | c | 73. | b | 85. | c | 97. | a | 109. | d |
| 38. | a | 50. | c | 62. | c | 74. | d | 86. | c | 98. | a | 110. | c |
| 39. | b | 51. | b | 63. | c | 75. | d | 87. | a | 99. | c |  |  |
| 40. | d | 52. | d | 64. | a | 76. | d | 88. | b | 100. | b |  |  |
| 41. | c | 53. | d | 65. | a | 77. | d | 89. | c | 101. | b |  |  |
| 42. | b | 54. | c | 66. | c | 78. | c | 90. | d | 102. | b |  |  |

### Exercises

##### Ex. 111

A selected list of accounts used by Sloan Manufacturing Company follows:

 Code

 A Cash

 B Accounts Receivable

 C Raw Materials Inventory

 D Work In Process Inventory

 E Finished Goods Inventory

 F Accounts Payable

 G Factory Labor

 H Manufacturing Overhead

 I Cost of Goods Sold

 J Sales

Sloan Manufacturing Company uses a job order system and maintains perpetual inventory records.

**Instructions**

Place the appropriate code letter in the columns indicating the appropriate account(s) to be debited and credited for the transactions listed below.

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 Account(s) Account(s)

Transactions Debited Credited

———————————————————————————————————————————

 1. Raw materials were purchased on account.

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 2. Issued a check to Estes Machine Shop for

 repair work on factory equipment.

———————————————————————————————————————————

 3. Direct materials were requisitioned for Job 280.

———————————————————————————————————————————

 4. Factory labor was paid as incurred.

———————————————————————————————————————————

 5. Recognized direct labor and indirect labor used.

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 6. The production department requisitioned indirect

 materials for use in the factory.

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 7. Overhead was applied to production based on a

 predetermined overhead rate of $8 per labor hour.

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 8. Goods that were completed were transferred to

 finished goods.

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 9. Goods costing $80,000 were sold for $105,000

 on account.

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 10. Paid for raw materials purchased previously

 on account.

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##### Solution 111 (10–15 min.)

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 Account(s) Account(s)

Transactions Debited Credited

———————————————————————————————————————————

 1. Raw materials were purchased on account. C F

———————————————————————————————————————————

 2. Issued a check to Estes Machine Shop for H A

 repair work on factory equipment.

———————————————————————————————————————————

 3. Direct materials were requisitioned for Job 280 D C

———————————————————————————————————————————

 4. Factory labor was paid as incurred. G A

———————————————————————————————————————————

 5. Recognized direct labor and indirect labor used D, H G

———————————————————————————————————————————

 6. The production department requisitioned indirect H C

 materials for use in the factory.

———————————————————————————————————————————

 7. Overhead was applied to production based on a

 on a predetermined overhead rate of $8 per labor hour D H

———————————————————————————————————————————

 8. Goods that were completed were transferred to E D

 finished goods.

———————————————————————————————————————————

 9. Goods costing $80,000 were sold for $105,000 B, I J, E

 on account.

———————————————————————————————————————————

 10. Paid for raw materials purchased previously F A

 on account.

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##### Ex. 112

Finn Manufacturing Company uses a job order cost accounting system and keeps perpetual inventory records. Prepare journal entries to record the following transactions during the month of June.

June 1 Purchased raw materials for $25,000 on account.

 8 Raw materials requisitioned by production:

 Direct materials $6,000

 Indirect materials 1,000

 15 Paid factory utilities, $2,100 and repairs for factory equipment, $3,000.

 25 Incurred $72,000 of factory labor.

 25 Time tickets indicated the following:

 Direct Labor (4,000 hrs × $12 per hr) = $48,000

 Indirect Labor (3,000 hrs × $8 per hr) = 24,000

 $72,000

##### Ex. 112 (cont.)

 25 Applied manufacturing overhead to production based on a predetermined overhead rate of $9 per direct labor hour worked.

 28 Goods costing $18,000 were completed in the factory and were transferred to finished goods.

 30 Goods costing $15,000 were sold for $25,000 on account.

##### Solution 112 (16–23 min.)

June 1 Raw Materials Inventory 25,000

 Accounts Payable 25,000

 (Purchase of raw materials on account)

 8 Work In Process Inventory 6,000

 Manufacturing Overhead 1,000

 Raw Materials Inventory 7,000

 (To record materials used)

 15 Manufacturing Overhead 5,100

 Cash 5,100

 (To record payment of factory utilities and repairs)

 25 Factory Labor 72,000

 Factory Wages Payable 72,000

 (To record factory labor costs)

 25 Work In Process Inventory 48,000

 Manufacturing Overhead 24,000

 Factory Labor 72,000

 (To assign factory labor to production)

 25 Work In Process Inventory 36,000

 Manufacturing Overhead 36,000

 (To apply manufacturing overhead to production)

 28 Finished Goods Inventory 18,000

 Work In Process Inventory 18,000

 (To record completion of production)

 30 Accounts Receivable 25,000

 Cost of Goods Sold 15,000

 Sales 25,000

 Finished Goods Inventory 15,000

 (To record sales of finished goods and its cost)

##### Ex. 113

Selected accounts of Kosar Manufacturing Company at year end appear below:

 RAW MATERIALS INVENTORY WORK IN PROCESS INVENTORY

 (a) 40,000 (d) 30,000 (d) 30,000 (g) 150,000

 (e) 70,000

 (f) 90,000

 FINISHED GOODS INVENTORY COST OF GOODS SOLD

 (g) 150,000 (h) 120,000 (h) 120,000

 FACTORY LABOR MANUFACTURING OVERHEAD

 (b) 110,000 (e) 95,000 (c) 75,000 (f) 90,000

 (e) 25,000

**Instructions**

Explain the probable transaction that took place for each of the items identified by letters in the accounts. For example:

(a) Raw materials costing $40,000 were purchased.

##### Solution 113 (9–14 min.)

(a) Raw materials costing $40,000 were purchased.

(b) Factory labor costs incurred amounted to $110,000.

(c) Actual manufacturing overhead costs incurred were $75,000.

(d) Direct materials requisitioned for production amounted to $30,000.

(e) Factory labor used consisted of:

 Direct labor $70,000

 Indirect labor 25,000

(f) Manufacturing overhead applied to production was $90,000.

(g) Completed goods costing $150,000 were transferred to finished goods inventory.

(h) Finished goods costing $120,000 were sold.

##### Ex. 114

The gross earnings of factory workers for Dinkel Company during the month of January are $100,000. The employer's payroll taxes for the factory payroll are $12,000. Of the total accumu-lated cost of factory labor, 75% is related to direct labor and 25% is attributable to indirect labor.

**Instructions**

(a) Prepare the entry to record the factory labor costs for the month of January.

(b) Prepare the entry to assign factory labor to production.

(c) Prepare the entry to assign manufacturing overhead to production, assuming the predetermined overhead rate is 125% of direct labor cost.

##### Solution 114 (8–12 min.)

(a) Factory Labor 112,000

 Factory Wages Payable 100,000

 Payroll Taxes Payable 12,000

(b) Work in Process Inventory 84,000

 Manufacturing Overhead 28,000

 Factory Labor 112,000

 ($112,000 × 75% = $84,000)

 (c) Work in Process Inventory 105,000

 Manufacturing Overhead 105,000

 ($84,000 × 125% = $105,000)

##### Ex. 115

Butler Manufacturing uses a job order cost accounting system. On April 1, the company has Work in Process Inventory of $7,600 and two jobs in process: Job No. 221, $3,600, and Job No. 222, $4,000. During April, a summary of source documents reveals the following:

For

 Materials Requisition Slips Labor Time Tickets

Job No. 221 $1,200 $2,600

 222 1,700 1,200

 223 2,400 2,900

 224 2,100 2,800

General use 600 400

Totals $8,000 $9,900

Butler applies manufacturing overhead to jobs at an overhead rate of 60% of direct labor cost. Job No. 221 is completed during the month.

**Instructions**

(a) Prepare summary journal entries to record the raw materials requisitioned, factory labor used, the assignment of manufacturing overhead to jobs, and the completion of Job No. 221.

(b) Calculate the balance of the Work in Process Inventory account at April 30.

##### Solution 115 (10–15 min.)

(a) April 30 Work in Process Inventory 7,400

 Manufacturing Overhead 600

 Raw Materials Inventory 8,000

 Work in Process Inventory 9,500

 Manufacturing Overhead 400

 Factory Labor 9,900

##### Solution 115 (cont.)

 Work in Process Inventory 5,700

 Manufacturing Overhead 5,700

 ($9,500 × 60% = $5,700)

 Finished Goods Inventory 8,960

 Work in Process Inventory 8,960

 ($3,600 + $1,200 + $2,600 + $1,560 = $8,960)

(b) Work in Process Inventory, April 30 = $21,240

 Job No. 222 $ 7,620 ($4,000 + $1,700 + $1,200 + $720)

 Job No. 223 7,040 ($2,400 + $2,900 + $1,740)

 Job No. 224 6,580 ($2,100 + $2,800 + $1,680)

 $21,240

##### Ex. 116

Manufacturing cost data for Dolan Company, which uses a job order cost system, are presented below:

 Case A Case B

 Direct Materials Used (a) $103,000

 Direct Labor $ 70,000 140,000

 Manufacturing Overhead Applied 63,000 (d)

 Total Manufacturing Costs 240,000 (e)

 Work in Process, 1/1/02 (b) 45,000

 Total Cost of Work in Process 300,000 (f)

 Work in Process, 12/31/02 (c) 40,000

 Cost of Goods Manufactured 205,000 (g)

**Instructions**

Indicate the missing amount for each letter. Assume that overhead is applied on the basis of direct labor cost and that the rate is the same for both cases.

##### Solution 116 (9–12 min.)

Case A

 (a) + $70,000 + $63,000 = $240,000

 (a) = $107,000

 $240,000 + (b) = $300,000

 (b) = $60,000

 $300,000 – (c) = $205,000

 (c) = $95,000

##### Solution 116 (cont.)

Case B [Note that the overhead rate from Case A is 90% ($63,000 ÷ $70,000)]

 $140,000 × 90% = (d)

 (d) = $126,000

 $103,000 + $140,000 + $126,000 = (e)

 (e) = $369,000

 $369,000 + $45,000 = (f)

 (f) = $414,000

 $414,000 – $40,000 = (g)

 (g) = $374,000

##### Ex. 117

Gray Corporation had the following transactions during its first month of operations:

1. Purchased raw materials on account, $85,000.

2. Raw materials of $30,000 were requisitioned to the factory. An analysis of the materials requisition slips indicated that $6,000 was classified as indirect materials.

3. Factory labor costs incurred were $95,000 of which $84,000 pertained to factory wages payable and $11,000 pertained to employer payroll taxes payable.

4. Time tickets indicated that $80,000 was direct labor and $15,000 was indirect labor.

5. Overhead costs incurred on account were $96,000.

6. Manufacturing overhead was applied at the rate of 150% of direct labor cost.

7. Goods costing $115,000 are still incomplete at the end of the month; the other goods were completed and transferred to finished goods.

8. Finished goods costing $90,000 to manufacture were sold on account for $120,000.

**Instructions**

Journalize the above transactions for Gray Corporation.

##### Solution 117 (12–17 min.)

1. Raw Materials Inventory 85,000

 Accounts Payable 85,000

2. Work in Process Inventory 24,000

 Manufacturing Overhead 6,000

 Raw Materials Inventory 30,000

3. Factory Labor 95,000

 Factory Wages Payable 84,000

 Payroll Taxes Payable 11,000

##### Solution 117 (cont.)

4. Work in Process Inventory 80,000

 Manufacturing Overhead 15,000

 Factory Labor 95,000

5. Manufacturing Overhead 96,000

 Accounts Payable 96,000

6. Work in Process Inventory 120,000

 Manufacturing Overhead 120,000

 ($80,000 × 150% = $120,000)

7. Finished Goods Inventory 109,000

 Work in Process Inventory 109,000

 ($24,000 + $80,000 + $120,000 = $224,000)

 ($224,000 – $115,000 = $109,000)

8. Accounts Receivable 120,000

 Sales 120,000

 Cost of Goods Sold 90,000

 Finished Goods Inventory 90,000

##### Ex. 118

Watson Manufacturing Company employs a job order cost accounting system and keeps perpetual inventory records. The following transactions occurred in the first month of operations:

1. Direct materials requisitioned during the month:

 Job 101 $22,000

 Job 102 16,000

 Job 103 24,000

 $62,000

2. Direct labor incurred and charged to jobs during the month was:

 Job 101 $30,000

 Job 102 26,000

 Job 103 20,000

 $76,000

3. Manufacturing overhead was applied to jobs worked on using a predetermined overhead rate based on 75% of direct labor costs.

4. Actual manufacturing overhead costs incurred during the month amounted to $66,000.

5. Job 101 consisting of 1,000 units and Job 103 consisting of 200 units were completed during the month.

##### Ex. 118 (cont.)

**Instructions**

(a) Prepare journal entries to record the above transactions.

(b) Answer the following:

1. How much manufacturing overhead was applied to Job 103 during the month?

2. Compute the unit cost of Jobs 101 and 103.

3. What is the balance in Work In Process Inventory at the end of the month?

4. Determine if manufacturing overhead was under- or overapplied during the month. How much?

##### Solution 118 (15–20 min.)

(a) 1. Work in Process Inventory 62,000

 Raw Materials Inventory 62,000

 2. Work in Process Inventory 76,000

 Factory Labor 76,000

 3. Work in Process Inventory 57,000

 Manufacturing Overhead 57,000

 4. Manufacturing Overhead 66,000

 Cash, Payables, etc. 66,000

 5. Finished Goods Inventory 133,500

 Work in Process Inventory 133,500

 [Job 101 $74,500; Job 103 $59,000—see (b) 2]

(b) 1. $15,000 ($20,000 × 75%).

 2. Unit cost: Job 101, $74.50; Job 103, $295.00.

 Job 101 Job 103

 Direct materials $22,000 $24,000

 Direct labor 30,000 20,000

 Overhead applied 22,500 15,000

 Total cost 74,500 59,000

 Units ÷ 1,000 ÷ 200

 Unit cost $74.50 $295

 3. Work In Process Inventory is $61,500 and consists of work performed on Job 102.

 Job 102

 Direct materials $16,000

 Direct labor 26,000

 Overhead applied 19,500

 Total cost $61,500

 4. Manufacturing overhead costs were underapplied by $9,000 during the month.

 Actual manufacturing overhead $66,000

 Manufacturing overhead applied 57,000

 Underapplied overhead $ 9,000

##### Ex. 119

The following inventory information is available for Ricci Manufacturing Corporation for the year ended December 31, 2002:

 Beginning Ending

 Inventories:

 Raw materials $17,000 $19,000

 Work in process 9,000 14,000

 Finished goods 11,000 8,000

 Total $37,000 $41,000

In addition, the following transactions occurred in 2002:

1. Raw materials purchased on account, $75,000.

2. Incurred factory labor, $80,000, all is direct labor. (Credit Factory Wages Payable).

3. Incurred the following overhead costs during the year: Utilities $6,800, Depreciation on manufacturing machinery $8,000, Manufacturing machinery repairs $6,200, Factory insurance $9,000 (Credit Accounts Payable and Accumulated Depreciation).

4. Assigned $80,000 of factory labor to jobs.

5. Applied $32,000 of overhead to jobs.

**Instructions**

(a) Journalize the above transactions.

(b) Reproduce the manufacturing cost and inventory accounts. Use T-accounts.

(c) From an analysis of the accounts, compute the following:

 1. Raw materials used.

 2. Completed jobs transferred to finished goods.

 3. Cost of goods sold.

 4. Under- or overapplied overhead.

##### Solution 119 (16–22 min.)

(a) 1. Raw Materials Inventory 75,000

 Accounts Payable 75,000

 2. Factory Labor 80,000

 Factory Wages Payable 80,000

 3. Manufacturing Overhead 30,000

 Accounts Payable 22,000

 Accumulated Depreciation 8,000

 4. Work in Process Inventory 80,000

 Factory Labor 80,000

 5. Work in Process Inventory 32,000

 Manufacturing Overhead 32,000

 (b)

 Raw Materials Inventory Work in Process Inventory

 Bal. 17,000 Bal. 9,000

 (1) 75,000 (4) 80,000

 Bal. 19,000 (5) 32,000

 Bal. 14,000

##### Solution 119 (cont.)

 Finished Goods Inventory Factory Labor

 Bal. 11,000 (2) 80,000 (4) 80,000

 8,000

 Manufacturing Overhead Cost of Goods Sold

 (3) 30,000 (5) 32,000

(c) 1. Raw materials used = $17,000 + $75,000 – $19,000 = $73,000.

 2. Completed jobs transferred to finished goods = W/P debits

 $9,000 + $112,000 – $14,000 = $107,000.

 3. Cost of goods sold = $11,000 + $107,000 – $8,000 = $110,000.

 4. Overhead overapplied = $2,000 (credit balance in Manufacturing Overhead).

##### Ex. 120

Job cost sheets for Howard Manufacturing are as follows:

 Job No 210 Quantity 1,500

 Manufacturing

 Date Direct Materials Direct Labor Overhead

 July 1 7,000 8,000 12,000

 8 7,800

 10 10,000

 15 6,500

 25 15,000

 Job No 211 Quantity 1,200

 Manufacturing

 Date Direct Materials Direct Labor Overhead

 July 1 4,000 6,000 9,000

 10 9,000

 15 8,000

 20 7,000

 27 12,000

##### Ex. 120 (cont.)

**Instructions**

(a) Answer the following questions:

 1. What was the balance in Work in Process Inventory on July 1 if these were the only unfinished jobs?

 2. What was the predetermined overhead rate in June if overhead was applied on the basis of direct labor cost?

 3. If July is the start of a new fiscal year and the overhead rate is 20% higher than in the preceding year, how much overhead should be applied to Job 210 in July?

 4. Assuming Job 210 is complete, what is the total and unit cost of the job?

 5. Assuming Job 211 is the only unfinished job at July 31, what is the balance in Work in Process Inventory on this date?

(b) Journalize the summary entries to record the assignment of costs to the jobs in July. (*Note:* Make one entry in total for each manufacturing cost element.)

##### Solution 120 (15–20 min.)

(a) 1. Job 210 — $7,000 + $8,000 + $12,000 = $27,000

 Job 211 — $4,000 + $6,000 + $9,000 = 19,000

 $46,000

 2. Manufacturing overhead rate = 150% of direct labor cost ($12,000 ÷ $8,000

 or $9,000 ÷ $6,000)

 3. July overhead rate = 150% × 120% = 180%

 Overhead applied in July = $25,000 × 180% = $45,000

 4. Direct materials $ 21,300

 Direct labor 33,000

 Manufacturing overhead ($12,000 + $45,000) 57,000

 Total cost $111,300

 Unit cost ($111,300 ÷ 1,500) $74.20

 5. Direct materials $20,000

 Direct labor 26,000

 Manufacturing overhead ($9,000 + $36,000) 45,000

 Total cost of work in process $91,000

(b) Work in Process Inventory 30,300

 Raw Materials Inventory 30,300

 Work in Process Inventory 45,000

 Factory Labor 45,000

 Work in Process Inventory 81,000

 Manufacturing Overhead 81,000

##### Ex. 121

Garner Company begins operations on July 1, 2002. Information from job cost sheets shows the following:

Manufacturing Costs Assigned

Job No. July August September

 100 $12,000 $8,800

 101 7,800 9,700 $12,000

 102 5,000

 103 11,800 6,000

 104 5,800 7,000

Job 102 was completed in July. Job 100 was completed in August, and Jobs 101 and 103 were completed in September. Each job was sold for 60% above its cost in the month following completion.

**Instructions**

(a) Compute the balance in Work in Process Inventory at the end of July.

(b) Compute the balance in Finished Goods Inventory at the end of September.

(c) Compute the gross profit for August.

##### Solution 121 (10–13 min.)

(a) Work in Process Inventory

 July Job 100 $12,000

 Job 101 7,800

 Balance, July 31 $19,800

(b) Finished Goods Inventory

 Job 101 $29,500

 Job 103 17,800

 Balance, Sept. 30 $47,300

(c) Gross Profit

 Month Job Number Sales COGS Gross Profit

 August 102 $8,000 $5,000 $3,000

##### Ex. 122

The accounting records of Roland Manufacturing Company include the following information:

 Dec. 31 Jan. 1

 Work in process inventory $ 20,000 $ 50,000

 Finished goods inventory 120,000 140,000

 Direct materials used 350,000

 Direct labor 160,000

 Selling expenses 125,000

Manufacturing overhead is applied at a rate of 150% of direct labor cost.

##### Ex. 122 (cont.)

**Instructions**

Answer the following questions:

1. What are the total of the debits to Work in Process Inventory during the year?

2. What is the amount transferred to Finished Goods Inventory during the year?

3. What is the cost of goods sold?

##### Solution 122 (10–14 min.)

1. Direct Materials $ 350,000

 Direct Labor 160,000

 Manufacturing Overhead Applied ($160,000 × 150%) 240,000

 Total debits $750,000

2. WORK IN PROCESS INVENTORY

 Balance 50,000 Transferred to

 From (1) 750,000 Finished Goods 780,000

 Balance 20,000

3. FINISHED GOODS INVENTORY

 Balance 140,000 Cost of Goods Sold 800,000

 From WIP (see 2) 780,000

 Balance 120,000

##### Ex. 123

Stoll Manufacturing, Inc. uses a job order costing system. The company uses predetermined overhead rates in applying manufacturing overhead to individual jobs. The predetermined overhead rate in Department X is based on direct labor hours, the rate in Department Y is based on machine hours, and the rate in Department Z is based on direct labor cost. At the beginning of the most recent year, members of Stoll's management team made the following estimates for the year:

 Department

 X Y Z

Direct labor hours 80,000 26,000 60,000

Machine hours 50,000 85,000 23,000

Direct labor cost $400,000 $150,000 $800,000

Direct materials $200,000 $ 26,000 $ 42,000

Manufacturing overhead $560,000 $340,000 $240,000

a. Compute the predetermined overhead rates for Departments X, Y, and Z.

##### Ex. 123 (cont.)

b. Stoll Manufacturing's records show the following information for Job #6854, which was entered into production on January 17 and completed on March 7.

 Department

 X Y Z

Direct labor hours 420 54 375

Machine hours 200 120 125

Direct labor cost $2,400 $1,080 $1,390

Direct materials $ 842 $1,260 $2,065

Compute the total manufacturing overhead applied to Job #6854.

c. On December 31, Stoll showed the following actual costs and operating data for all jobs worked on during the year:

 Department

 X Y Z

Direct labor hours 76,000 28,920 63,000

Machine hours 54,000 87,200 21,000

Direct labor cost $395,200 $138,000 $815,000

Direct materials $215,900 $ 24,380 $ 39,080

Manufacturing overhead $540,000 $345,000 $254,000

Compute the amount of under- or overapplied overhead in each department at the end of the year and indicate whether it is under- or overapplied.

##### Solution 123 (15–20 min.)

a. Predetermined overhead rates for Departments X, Y, and Z:

Department X — $560,000 ÷ 80,000 direct labor hours = $7 per direct labor hour

Department Y — $340,000 ÷ 85,000 machine hours = $4 per machine hour

Department Z — $240,000 ÷ $800,000 direct labor cost = 30% of direct labor cost

b. Department X — 420 direct labor hours × $7 per direct labor hour = $2,940

Department Y— 120 machine hours × $4 per machine hour = 480

Department Z — $1,390 direct labor cost × 30% = 417

 Total overhead applied to Job #6854 = $3,837

c. Department X — 76,000 DLH × $7 = $532,000

 compared to actual overhead $540,000 – $8,000 underapplied

 Department Y — 87,200 MH × $4 = $348,800

 compared to actual overhead $345,000 – $3,800 overapplied

 Department Z — $815,000 DLC × 30% = $244,500

 compared to actual overhead $254,000 – $9,500 underapplied

##### Ex. 124

Mr. J. G. Pigg, III is the sole owner of a brick company that manufactures custom bricks used in upscale homes. No two customers have the same type of bricks. The bricks go through three processes: mixing, shaping, and firing. The company uses a job order cost system and computes a predetermined overhead rate in each department. The mixing department bases its rate on direct materials, the shaping department bases its rate on machine hours, and the firing department bases its rate on direct labor hours. At the beginning of the year, the company made the following estimates:

 Department

 Mixing Shaping Firing

Direct labor hours 80,000 45,000 60,000

Machine hours 30,000 70,000 21,000

Direct materials $300,000 $ 40,000 $15,000

Manufacturing overhead $150,000 $140,000 $75,000

a. Compute the predetermined overhead rate to be used in each department during the upcoming year.

b. Assume the overhead rates that you computed in a. above are in effect. Compute the total overhead cost to be assigned to Dr. Snout's order—Job #5417, assuming the following data:

 Department

 Mixing Shaping Firing

Direct labor hours 300 80 92

Machine hours 80 120 120

Direct materials $6,000 $120 $300

c. If actual overhead incurred totaled $3,500, compute the amount of over- or underapplied manufacturing overhead.

##### Solution 124 (15–20 min.)

a. Mixing — $150,000 ÷ $300,000 direct materials = 50% of direct materials

Shaping — $140,000 ÷ 70,000 machine hours = $2.00 per machine hour

Firing — $75,000 ÷ 60,000 direct labor hours = $1.25 per direct labor hour

b. Overhead in Dr. Snout's order:

Mixing — $6,000 direct materials × 50% = $3,000

Shaping — 120 machine hours × $2.00 = 240

Firing — 92 direct labor hours × $1.25 = 115

 Total overhead = $3,355

c. Actual overhead $3,500 compared to applied overhead $3,355 = $145 underapplied overhead

##### Ex. 125

Landis Company uses a job order cost system in each of its two manufacturing departments. Manufacturing overhead is applied to jobs on the basis of direct labor cost in Department A and machine hours in Department B.

In establishing the predetermined overhead rates for 2002, the following estimates were made for the year:

 Department

 A B

 Manufacturing overhead $2,100,000 $1,600,000

 Direct labor cost 1,200,000 1,200,000

 Direct labor hours 100,000 100,000

 Machine hours 200,000 400,000

During January, the job cost sheet showed the following costs and production data:

 Department

 A B

 Direct materials used $195,000 $128,000

 Direct labor cost 100,000 110,000

 Manufacturing overhead incurred 180,000 135,000

 Direct labor hours 8,000 8,400

 Machine hours 16,000 34,000

**Instructions**

(a) Compute the predetermined overhead rate for each department.

(b) Compute the total manufacturing cost assigned to jobs in January in each department.

(c) Compute the balance in the Manufacturing Overhead account at the end of January and indicate whether overhead is over- or underapplied.

##### Solution 125 (15–20 min.)

(a) Predetermined overhead rates:

 Department A (using direct labor cost): $2,100,000 ÷ $1,200,000 = 175%

 Department B (using machine hours): $1,600,000 ÷ 400,000 = $4 per machine hour

(b) Total manufacturing costs by department:

 Department A:

 Direct materials $195,000

 Direct labor cost 100,000

 Manufacturing overhead applied ($100,000 × 175%) 175,000

 Total manufacturing costs $470,000

 Department B:

 Direct materials $128,000

 Direct labor cost 110,000

 Manufacturing overhead applied (34,000 hrs. × $4) 136,000

 Total manufacturing costs $374,000

##### Solution 125 (cont.)

 (c) MANUFACTURING OVERHEAD

 Dept. A 180,000 Dept. A 175,000

 Dept. B 135,000 Dept. B 136,000

 315,000 311,000

 Bal. Underapplied 4,000

##### Ex. 126

Edwards Company applies manufacturing overhead to jobs on the basis of machine hours used. Overhead costs are expected to total $900,000 for the year, and machine usage is estimated at 200,000 hours.

In January, $93,000 of overhead costs are incurred and 22,000 machine hours are used. For the remainder of the year, $974,000 of additional overhead costs are incurred and 214,000 additional machine hours are worked.

**Instructions**

(a) Compute the manufacturing overhead rate for the year.

(b) What is the amount of over- or underapplied overhead at January 31? How should this amount be reported in the financial statements prepared on January 31?

(c) What is the amount of over- or underapplied overhead at December 31?

##### Solution 126 (11–14 min.)

(a) $4.50 per machine hour ($900,000 ÷ 200,000)

(b) Incurred $93,000

 Applied ($4.50 × 22,000) 99,000

 Overapplied overhead $ 6,000

This amount should be reported as an unearned revenue in the current liability section of the January 31 balance sheet.

(c) Incurred ($93,000 + $974,000) $1,067,000

 Applied ($4.50 × 236,000) 1,062,000

 Underapplied overhead $ 5,000

##### Ex. 127

Klinger Company estimates that annual manufacturing overhead costs will be $1,800,000 for 2002. The actual overhead costs at the end of 2002 are $1,790,000. Activity base information for 2002 follows:

 Activity Base Estimated Actual

 Direct Labor Cost $2,000,000 $2,100,000

 Direct Labor Hours 180,000 190,000

 Machine Hours 200,000 192,000

##### Ex. 127 (cont.)

**Instructions**

(a) Compute the predetermined overhead rate for each activity base.

(b) Compute the amount of overhead applied in 2002 for each activity base.

(c) Compute the amount of under- or overapplied overhead for 2002 for each activity base.

##### Solution 127 (12–16 min.)

(a) Predetermined Overhead rate as a % of direct labor cost:

 $1,800,000 ÷ $2,000,000 = 90%

 Predetermined Overhead rate per hour of direct labor:

 $1,800,000 ÷ 180,000 = $10.00 per hour

 Predetermined Overhead rate per machine hour used:

 $1,800,000 ÷ 200,000 = $9.00 per machine hour

(b) Overhead applied as a % of direct labor cost: (c) Over- or Underapplied Overhead

 $2,100,000 × .90 = $1,890,000 ($1,890,000 – $1,790,000 =

 $100,000 Overapplied)

 Overhead applied per hour of direct labor:

 190,000 × $10.00 = $1,900,000 $1,900,000 – $1,790,000 =

 $110,000 Overapplied)

 Overhead applied per machine hour used:

 192,000 × $9.00 = $1,728,000 ($1,728,000 – $1,790,000 =

 $62,000 Underapplied)

##### Ex. 128

Urick Manufacturing Company makes specialty tools. In January, Urick incurs manufacturing costs of $12,000,000 for direct materials, direct labor, and overhead. 25% of the total costs represents overhead applied. The overhead rate is $1 for every $2 of direct labor costs incurred. Inventory balances were:

 January 1 January 31

 Raw materials $400,000 $600,000

 Work in process 600,000 800,000

 Finished goods 400,000 500,000

At the end of January, there was $1,000 of overapplied overhead.

**Instructions**

(a) Determine the cost of raw materials purchased in January.

(b) Prepare a cost of goods manufactured schedule for January 2002.

(c) Compute the cost of goods sold for January.

##### Solution 128 (15–20 min.)

(a) Overhead applied ($12,000,000 × 25%) = $3,000,000

 Direct labor used ($2 × $3,000,000) = $6,000,000

 Direct materials used ($12,000,000 – $9,000,000) = $3,000,000

 Ending raw materials inventory $ 600,000

 Direct materials used 3,000,000

 3,600,000

 Less: Beginning raw materials inventory 400,000

 Raw materials purchases $3,200,000

(b) URICK MANUFACTURING COMPANY

 Cost of Goods Manufactured Schedule

 For the Month Ended January 31, 2002

———————————————————————————————————————————

 Work in process, January 1 $ 600,000

 Direct materials used $3,000,000

 Direct labor 6,000,000

 Manufacturing overhead applied 3,000,000

 Total manufacturing costs 12,000,000

 Total cost of work in process 12,600,000

 Less: Work in process, January 31 800,000

 Cost of goods manufactured $11,800,000

(c) Finished goods, January 1 $ 400,000

 Cost of goods manufactured 11,800,000

 Cost of goods available for sale 12,200,000

 Finished goods, January 31 500,000

 Cost of goods sold $11,700,000

##### Ex. 129

The following information is available for Hanson Company at December 31, 2002:

1. Inventory balance Beginning of Year End of Year

 Finished Goods $14,000 $10,000

 Work in Process 6,000 8,000

 Raw Materials 10,300 6,500

2. Debit postings to Work in Process Inventory during the year were:

 Direct materials $ 70,000

 Direct labor 50,000

 Manufacturing overhead applied 100,000

3. Sales totaled $350,000 for the year.

**Instructions**

(a) Prepare a condensed cost of goods manufactured schedule.

(b) Prepare an income statement for the year through gross profit.

##### Solution 129 (14–18 min.)

(a) HANSON COMPANY

Cost of Goods Manufactured Schedule

For the Year Ended December 31, 2002

 Work in process, January 1 $ 6,000

 Direct material used $ 70,000

 Direct labor 50,000

 Manufacturing overhead applied 100,000

 Total manufacturing costs 220,000

 Total cost of work in process 226,000

 Less: Work in process, December 31 8,000

 Cost of goods manufactured $218,000

(b) HANSON COMPANY

(Partial) Income Statement

For the Year Ended December 31, 2002

 Sales $350,000

 Cost of Goods Sold

 Finished Goods, January 1 $ 14,000

 Cost of goods manufactured 218,000

 Cost of goods available for sale 232,000

 Finished Goods, December 31 10,000

 Cost of goods sold 222,000

 Gross profit $128,000

### COMPLETION STATEMENTS

 130. Cost accounting involves the measuring, recording, and reporting of \_\_\_\_\_\_\_\_\_\_\_\_\_\_ costs.

 131. There are two basic types of cost accounting systems: (1)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ system, and (2)\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ system.

 132. A \_\_\_\_\_\_\_\_\_\_\_\_\_\_ cost system is appropriate when homogeneous products are continuously produced, whereas a \_\_\_\_\_\_\_\_\_\_\_\_\_\_ cost system would be more appropriate if the product is custom-made.

 133. In a job order system, raw materials purchased are charged to the \_\_\_\_\_\_\_\_\_\_\_\_\_\_ account.

 134. Of these three accounts; Raw Materials Inventory, Factory Labor, and Manufacturing Overhead, \_\_\_\_\_\_\_\_\_\_\_\_\_\_ is not a control account.

 135. If $30,000 direct materials are requisitioned for a job and $7,000 of indirect materials are requisitioned for general use, the debit to Work In Process Inventory should be for $\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

 136. The cost of producing a particular job under a job cost system is accumulated on a record called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

 137. Manufacturing overhead is applied to jobs by means of a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ rate.

 138. If actual manufacturing overhead was greater than the amount of manufacturing overhead applied to jobs, the Manufacturing Overhead account will have a \_\_\_\_\_\_\_\_\_\_\_ balance and overhead is said to be \_\_\_\_\_\_\_\_\_\_\_\_\_\_.

 139. At the end of the year, any balance in the Manufacturing Overhead account should be eliminated as an adjustment to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

##### Answers to Completion Statements

 130. product

 131. job order cost, process cost

 132. process, job order

 133. Raw Materials Inventory

 134. Factory Labor

 135. 30,000

 136. job cost sheet

 137. predetermined overhead

 138. debit, underapplied

 139. cost of goods sold

### MATCHING

140. Match the items in the two columns below by entering the appropriate code letter in the space provided.

 A. Cost accounting F. Process cost system

 B. Materials requisition slip G. Job cost sheets

 C. Time ticket H. Predetermined overhead rate

 D. Cost accounting system I. Overapplied overhead

 E. Job order cost system J. Underapplied overhead

\_\_\_\_ 1. Used to apply manufacturing overhead to jobs.

\_\_\_\_ 2. Measures, records, and reports product costs.

\_\_\_\_ 3. When actual manufacturing overhead costs are greater than the overhead applied to products.

\_\_\_\_ 4. Manufacturing cost accounts are fully integrated into the general ledger.

\_\_\_\_ 5. Source document which authorizes issuance of raw materials to production.

\_\_\_\_ 6. Appropriate when products have distinguishing and heterogeneous characteristics.

\_\_\_\_ 7. Constitute a subsidiary ledger for Work in Process Inventory.

\_\_\_\_ 8. Indicates number of hours that employees work and the account to be charged.

\_\_\_\_ 9. Appropriate when products are homogeneous and are produced continuously.

\_\_\_\_ 10. When actual manufacturing overhead costs are less than the overhead applied to products.

##### Answers to Matching

1. H 6. E

2. A 7. G

3. J 8. C

4. D 9. F

5. B 10. I

### SHORT-ANSWER ESSAY QUESTIONS

##### S-A E 141

A job order cost accounting system is fully integrated into the general ledger of a company. Identify the major general ledger accounts used in a job order cost system. Explain how manufacturing costs flow through these accounts so that inventories may be costed and income determined when goods are sold.

##### Solution 141

When a job order cost accounting system is fully integrated into the general ledger of a company, the major general ledger accounts used are Raw Materials Inventory, Factory Labor, Manufacturing Overhead, Work in Process Inventory, and Finished Goods Inventory. As manufacturing costs are incurred, they are debited to the Raw Materials Inventory, Factory Labor, and Manufacturing Overhead accounts. As materials are used, labor is assigned, or overhead is applied, the costs are taken out of these accounts and debited to Work in Process Inventory. When jobs are finished, the costs flow from the Work in Process Inventory account to the Finished Goods Inventory account, and when jobs are sold, the costs are transferred to Cost of Goods Sold from Finished Goods Inventory.

##### S-A E 142

Manufacturing overhead items are indirect product costs that cannot be traced to individual products. Explain how manufacturing overhead costs are accumulated and how they are assigned to products in a job order cost system.

##### Solution 142

As manufacturing overhead costs are incurred, they are debited to the Manufacturing Overhead account. As jobs move through the factory, manufacturing overhead costs are applied to specific jobs using the predetermined overhead rate. This rate is computed prior to the beginning of the year by dividing estimated annual overhead costs by expected annual operating activity (generally expressed as direct labor hours, direct labor cost, or machine hours). The overhead is applied by determining how much activity was expended on a particular job (for example, direct labor hours), and applying the rate to that activity.

##### S-A E 143 (Ethics)

People Carrier Systems, Inc. (PCS) modifies vans that seat 15–20 people by adding additional safety features or wheelchair ramps. Most of its customers are cities and counties, who use the vans to transport school children, the elderly, or the handicapped. The company has specialized in a no-frills approach, emphasizing safety, high quality, and low cost. The company's president was quoted as saying, "Let the other guys make a van pretty. We get people where they need to go—faster, better, and cheaper than anybody else."

The company obtains jobs by being the lowest bidder in a sealed bidding process. Recently, the company was solicited to submit a bid for a top-10 college, for a van to be used by its athletic team. Some specialized items were required, such as the school's logo on the outside of the van, and the vinyl seats had to be covered in school colors. The company submitted a bid, and was very surprised to obtain it.

##### S-A E 143 (cont.)

When the job was being prepared, the job manager pointed out that several extra costs could result in this job showing a loss. The boss, an ardent supporter of sports in general and this team in particular, told the manager to just record the standard labor and overhead cost for this job. He says that they could use the present rate for specialized jobs, and increase the overhead application rate (used in submitting bids) by 5% for future routine jobs. "After all," he says, "nobody else comes close to our price anyway. This could start a whole new line of business for us."

**Required:**

1. Who are the stakeholders in the decision to increase overhead for routine jobs?

2. Is the decision to subsidize special jobs by increasing the overhead rate on routine jobs ethical? Briefly explain.

##### Solution 143

1. The stakeholders include:

* The employees and managers of PCS
* Customers who purchase standard vans
* Customers who purchase sports vans
* Shareholders of PCS

2. The decision could be considered ethical, if the company clearly understands that it is allowing the customers of the standard vans to cover some of the costs of the specialty ones. This might not be a bad decision, especially if the specialty business is only a small fraction of the total business.

The company might be compromising its own best interests, however, if it arbitrarily damages relationships with existing customers in order to gain others. It seems undeniable that established customers are preferable to untested ones. Thus, the decision, while probably ethical, may not be a good decision.

##### S-A E 144 (Communication)

Bridal Treasures, Inc. makes customized wedding gowns. The customer selects a pattern for the basic gown, and then selects fabric and trim. Once the design and the materials have been agreed upon, a Statement of Estimated Cost is signed by the company and by the customer.

Overhead is applied based on the number of days a gown is in process. Usually, five gowns are being worked on at a time. Therefore, each gown is charged 1/5 of a daily estimated overhead amount.

Customer Ruth Finney's wedding dress took four days to complete. However, after the first three days had elapsed, Diane Lange, a movie personality, suddenly decided to get married, and ordered a very lavish gown. All other work was suspended, and the work on Ms. Finney's dress was delayed six days. The final day of its construction was on the tenth day after it had been begun.

**Required:**

You are the accounting manager for Bridal Treasures. Write a memo to the billing department. Instruct them as to the appropriate number of overhead days to charge to Ms. Finney's account.

##### Solution 144

TO: Billing Department

FROM: M. Long, Accounting Manager

RE: Overhead billing, Finney account

As you know, our standard procedure in billing overhead is to simply multiply our daily overhead rate by the number of days the gown was in our possession. However, for the Finney gown, and any other jobs we suspended for the Diane Lange gown, we should not charge for the days the gowns were in our possession but not being worked on.

We should adjust the billing for the Diane Lange gown, so that it absorbs the full daily cost of overhead, since it actually was the only job worked on during those six days. The Finney job should be charged only four days of overhead. Other suspended jobs should be treated similarly.

Please call if you have questions.

(signed)